

SHORTER NOTES

Ethnopharmacological Notes on Two Venezuelan *Asplenium* — During an ethnobotanical inventory in the upper Morón River drainage (10°17' – 10°28' N Lat. 68°10' – 68°16' W Long.), Carabobo State, Venezuela, information was gathered on the medicinal uses of plants from the area. The elevation of this region is between 1000–1200m, and the vegetation is a typical cloud forest of the Coastal Mountain Range. The local people use at least 41 native species; most of them are medicinal in nature, including two ferns belonging to the genus *Asplenium*. Since times remote, *Asplenium* species have been used as medicines; in fact, the very etymology of the name *Asplenium* comes from the Greek for spleen. Modern references mention various species of this genus with different medicinal uses (Boom, Amer. Fern J. 75:19–21, 1985; Wile May, Bot. Rev. 44:491–528, 1978; Murillo, Usos de los helechos, Univ. Naoc. Colombia, 1983).

We report here a remarkable case of two different species of *Asplenium* that are commonly used as medicines in our study area. *Asplenium obtusifolium* L., locally known as “Salvajito”, is used as an analgesic to relieve backaches. A decoction using the entire plant is administered two or three times a day for five days (Diaz & Niño 235 PORT, MO). *Asplenium serratum* L., locally known as “Canaguara”, is used as a analgesic, for pains from bruises and contusions. A decoction of the entire plant is prepared and taken with milk (Diaz 542 PORT, MO).

This is the first report of the use of these two ferns to treat back and muscle aches produced by trauma. As a final note, we mention that Tryon (Amer. Fern J. 49:10–24, 1959) reported that the Inca people sometimes use an unidentified species of *Asplenium* called “espinicu” as a substitute for “coca”. Tryon’s information, along with the new uses reported here, suggests that some type of alkaloid may be present in these and other species of the genus. — FRANCISCO ORTEGA and WILMER DIAZ, Herbario Universitario, UNELLEZ-Guanare, Programa de Recursos Naturales Renovables, Guanare 3310, Edo. Portuguesa, Venezuela.

Vasculature of the Rhizome in the Fern Genus *Dipteris* — During the course of a comparative study of the vascular organization in the homosporous ferns, some interesting morphological peculiarities in the vasculature of the rhizome in three species of *Dipteris* viz., *D. conjugata* Reinw., *D. lobbiana* (Hook.) Moore and *D. wallichii* (R. Br.) Moore were noticed. The results were presented in a National Symposium at Palayamkottai, Tamil Nadu (India) and published by Chandra S. (Indian Fern J. 9:133–137, 1992)

Recently, one of us (S.K.) had an opportunity to visit the US National Herbarium, Smithsonian Institution, Washington, DC, and through the courtesy of David B. Lellinger, procured some rhizome material of *D. chinensis* Christ (Y. Taiang 4706; US 1595383), *D. nieuwenhuisii* Christ (P. W. Richards 2133; US 2139135) and *D. novoguineensis* Posth., (L.J. Brass 29665; US 235728). Thus, details of six species out of a total of eight species of the genus are available, the remaining two being *D. papilioniformis* Kjellberg from Celebes and *D. quinquefurcata* (Bak.) Christ from Borneo which could not be studied due to a lack of material.

The observations made on the three species procured from US National Herbarium are presented here, and the present investigation also aims to explain the possible relationship

among the six species studied and to assess how far these attributes are of potential value in taxonomic and phylogenetic considerations. The rhizome in all three species is slender, wide-creeping and dichotomously branched like the three species studied earlier. The fronds are monomorphic and borne in two rows on the dorsal surface of the rhizome. The vascular cylinder of the rhizome is solenostelic with large pith and is similar to the three species of *Dipteris* studied earlier. The vascular supply to the leaf in all three species (*D. chinensis*, *D. nieuwenhuisii* and *D. novoguineensis*) resembles that of *D. conjugata*, where each leaf trace consists of a solitary, C-shaped, ribbon-like strand that is undivided up to a point close below the base. The branch trace does not have any correlation with the leaf trace, and the branching of the vascular cylinder is dichotomous. The root traces originate as superficial vascular strands from any part of the outer surface of the vascular cylinder as in other three species studied earlier. Thus *D. chinensis*, *D. conjugata*, *D. nieuwenhuisii* and *D. novoguineensis* form one group of species where each leaf trace consists of a solitary, undivided, C-shaped strand indicating the relatively primitive condition of the vasculature of its axis as in *Matonia*, *Gleichenia* and *Cheiropleuria*.

D. lobbiana shows a sign of advancement where the leaf trace arises as two separate strands, one from either margin of the leaf gap, which further divide into four vascular strands before entering the leaf base. Further increase in the number of vascular strands constituting a leaf trace has been reported in *D. wallichii* where the leaf trace originates as four separate strands, two from either margin of the gap, which may later divide to form eight vascular strands before the trace leaves the cortex of the axis. On the basis of the vasculature of the rhizome, it is suggested that the complexity of the leaf trace in these two species may be held as forming a series progressive from the simple condition (*D. chinensis*, *D. conjugata*, *D. nieuwenhuisii* and *D. novoguineensis*) through *D. lobbiana*, leading to the more complex state in *D. wallichii* which probably exhibits a derived condition. Panigrahi & Patnaik (Amer. Fern J. 53:42-46, 1963) reported *D. wallichii* as tetraploid ($2n=66$) which further strengthens the evolutionarily advanced condition of the species — SUBHASH CHANDRA AND SURJIT KAUR, National Botanical Research Institute, Lucknow-226001 (India).